1ST PRINTING JUNE 01

SEGA

WORLD SERIES BASEBALL

Universal Kit

Kit Installation Instructions
& Service Manual

Switchable *FROM* High Resolution 31K
TO Standard (Low) Resolution 15.75K.

1 - 2 PLAYER GAME

SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-1292

Warranty

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions.   This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

World Series 2001
Sega Naomi System
Kit Contains List

Part #	Desc	Qty
400-5397-01	NAOMI POWER SUPPLY	1
838-13616	AUDIO POWER AMP 2 CH	1
560-5407-UL	AUDIO XFORMER 120V	1
838-13683-93CV1	JAMMA I/O BD (NAOMI)	1
600-7141-200	USB CABLE	1
600-7009-2500	VGA VIDEO CABLE	1
840-0051D-01	ASSY CASE PC1 DIMM BD	1
600-7247-500	CABLE SCSI TYPE 2 500MM	1
LOC. PURCHASE	SERVICE SWT BRKT ASSY	1
XKT-0833	GD-ROM DRIVE KIT	1
610-0630-0010	GD SOFT KIT WS2K1	1
999-1293	MARQUEE WS2K1	1
999-1294	INST SHT AMER LG WS2K1	1
999-1295	INST SHT NAT LG WS2K1	1
999-1296	INST SHT CONTROL WS2K1	1
999-1297	SIDE DECALS WS2K1	2
NOA-20010-01	CONT PNL ASSY WS2K1 (See Breakdown Next Page.)	1
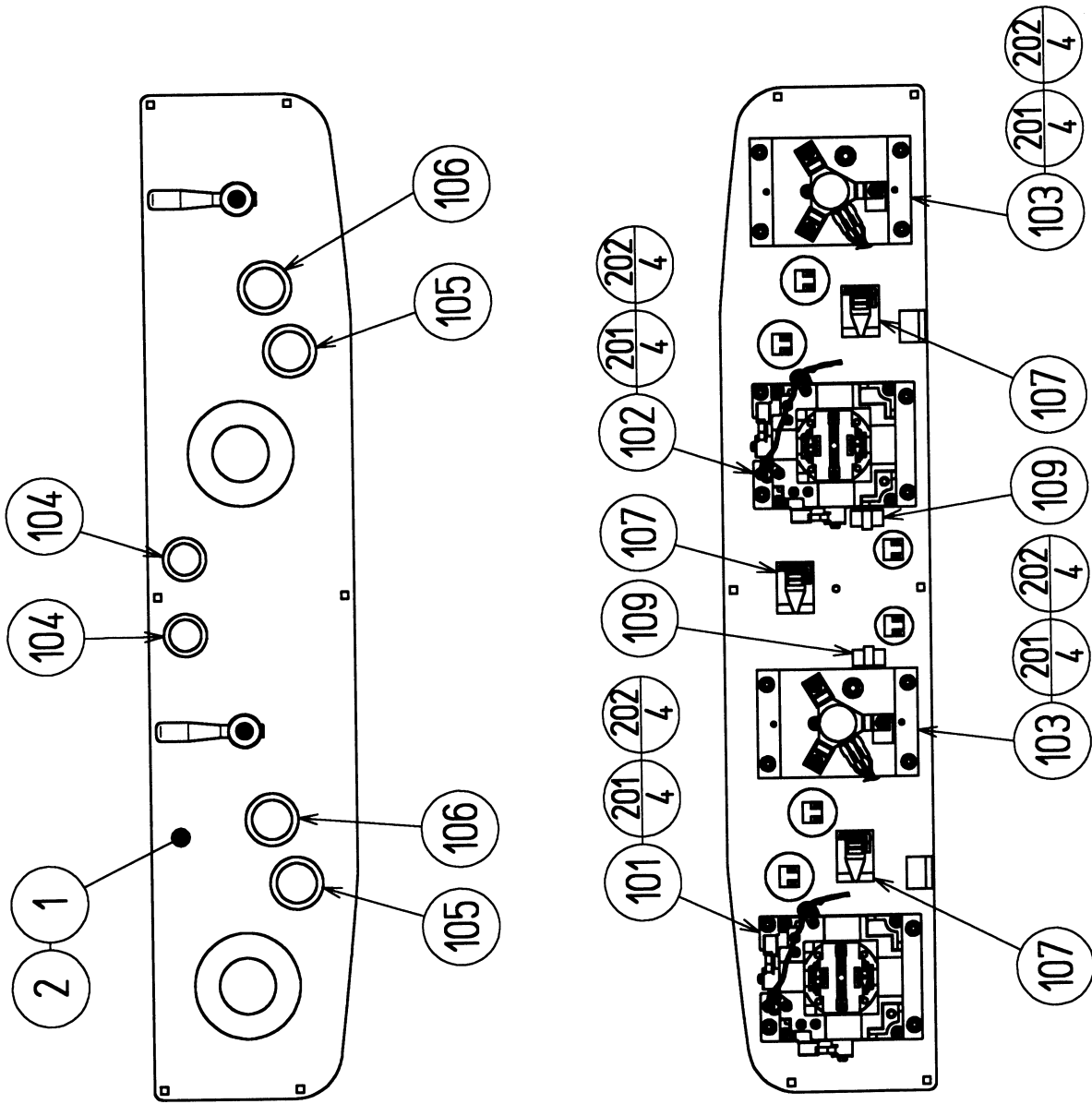
ITEM NO.	PART NO.	DESCRIPTION
1	HOT-2023	CTRL PNL BASE 2A4B2S
2	NOA-2025-01	CTRL PNL PLATE 2A4B2S ENG
101	610-6723-4B02	ASSY ANALOG JOY 4B PINK
102	610-6723-4B01	ASSY ANALOG JOY 4B GREEN
103	610-0409	ASSY BAT MECHA
104	999-1290	PUSHBUTTON RND YELLOW W/MICRO (2 PER)
105	999-1086	PUSHBUTTON RND GREEN W/MICRO (2 PER)
106	999-1289	PUSHBUTTON RND PINK W/MICRO (2 PER)
107	280-5009-01	CORD CLAMP 21
109	280-5275-SR10	CORD CLAMP SR10
201	050-U00400	U NUT M4
202	060-F00400	FLT WSHR M4
203	060-S00400	SPR WSHR M4
204	050-H00400	HEX NUT M4

120

SPECIAL NOTICE FOR
ALL SEGA NAOMI KITS

PROBLEM:

The SEGA Naomi Game kits are actually 'JAMMA Dependent'. What this means exactly is they will only install into existing JAMMA Cabinets. If an operator tries to install these kits into a Non-JAMMA cabinet, they will first have to bring the wiring up to JAMMA Standards.

SOLUTION:

°   Step 1   Disconnect the games original DC Power Supply. You may only use the power supply provided with your kit. Be sure to set the voltages going to your Game BD to 5.1 and 3.3 volts DC to assure proper operation (Measure on Square Connector at Game BD. Yellow = 5vdc / Brown = 3.3vdc / White = Gnd)

°   Step 2   You MUST USE THE COIN METER SUPPLIED WITH YOUR KIT to assure proper Coin acceptance. A minimum 18 Gauge wire should be used from the Coin Meter 1 output line on your JAMMA Harness. The 5vdc (Yellow) wire found in the wiring bag of your kit MUST BE USED for the supply voltage to the meter.

STOP
IMPORTANT!

Not following the directions provided herein may cause your game to malfunction.
All electrical work should be performed by the site's Serviceman or Technician.

⚠ WARNING!

● In order to prevent an electric shock and short circuit, be sure to turn power off before performing work or touching the interior parts of the product.

● Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

● Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

If you have any questions please contact the SEGA Service Department at the numbers given above.

INSTALLATION INSTRUCTIONS

1) First. Remove all access panels from the game. Locate the original game Logic PCB's & Power Supply and remove from the Cabinet by first disconnecting all harnesses from the boards. (You need only to splice in the Main Power (110v AC) into the 3-Pin Connector (GRN/WHT/BLK).)

2) Remove all existing game harnesses (we suggest using New Jamma Harnesses (*NOT contained in the kit*) to ensure reliability).

3) Locate the most convenient and open area of the cabinet to mount the World Series 2001 Naomi System Assembly. Make sure this area is free and clear of all cable harnesses and grounds, cable clamps, etc.

Vacuum out or clean bottom of cabinet of dirt & miscellaneous parts (e.g. screws, loose coins / tokens, etc.).

Good Idea!

Remove all exterior decals and repair any cabinet damage. Repaint cabinet if necessary. Remove the Monitor Plexi or if your game plexi has Silk-screened artwork, you will need to strip it off.

Good Idea!

4) Connect the JAMMA Harnesses to the JVS-JAMMA Interface Boards. Separate the wires from each other (i.e. Control Panel, Video, Speaker, Power Supply). Run the various harnesses to the part of the cabinet they go to ensuring they are dressed properly & secured to the cabinet. Locate the Volume/ Speaker/Coin Meter Cable and connect to your existing **Switch Bracket** or use the new one included with the kit. **Note:** *If you are using a VGA Compatible Monitor you can run your VGA Cable directly to the monitor or connect it to your JVS JAMMA Interface for RGB Conversion to your JAMMA Cables.*

5) Remove Marquee from cabinet and cut to fit the new World Series 2001 Marquee in place.

REPLACE old Joysticks & Buttons with the **NEW** ones supplied in Kit.

Good Idea!

6) First remove all Joystick and Button assemblies from the Control Panel. Remove Lexan and Control Panel Overlay. Proceed to clean surface of the Control Panel by removing all adhesive and dirt. Fill in or plug up existing button holes to set up a blank work area for your new controls.

7) Install the new Control Panel Overlay by carefully peeling off the paper backing and laying down on the panel. Smooth it out, starting in the center and working your way to the edges (removing all of the trapped air pockets). If necessary, cut the edges of the overlay excess and fold under panel.

8) Cut out the button and Joystick Holes. Install Joystick and buttons from kit into the Control Panel and tighten down. Connect all game harness wires to switches and buttons.

INSTALLATION INSTRUCTIONS

9) Proceed to place new decals on the sides of the cabinet. Locate a new monitor bezel, if needed, and replace glass, if required (due scratches). Install Instruction Placard to the back of the Monitor Glass.

NOTE: As a precaution, disconnect the JAMMA Harness from the I/O Boards and turn power on. With a Multi-Meter, measure the 5v and 3.3v. Adjust if necessary to 5.15v DCand 3.3vDC. Measure the +12 to ensure the wires and voltages are in the correct position. Turn power off. Plug in the JAMMA Harness once again to the I/O Boards. The Attract Mode should appear on the screen.
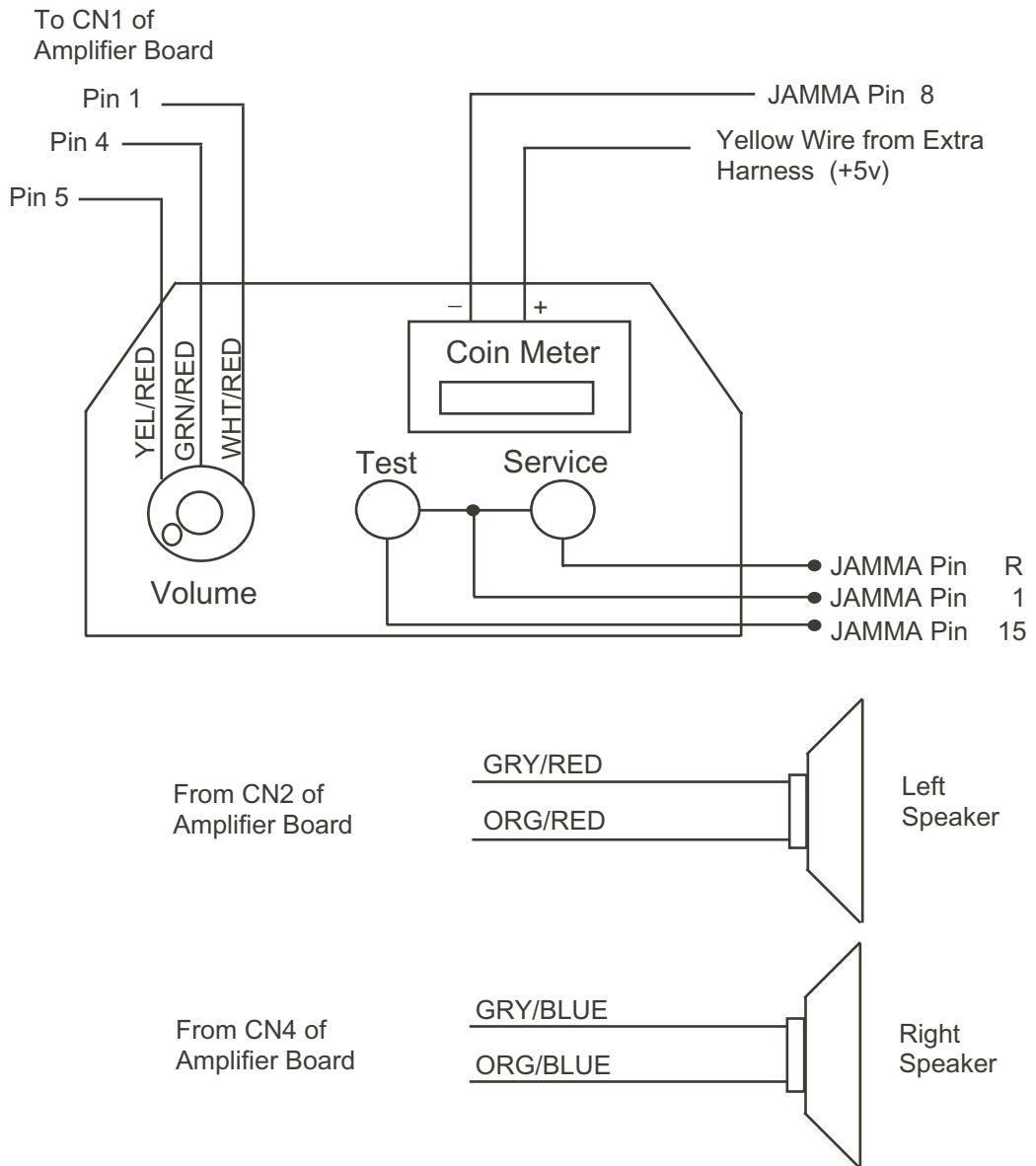
Adjust the **SIZE**, **CONTRAST**, **BRIGHTNESS**, and **COLORS** on the Monitor for optimum appearance. Adjust **VERTICAL/HORIZONTAL** Hold to get a stable picture, if required.
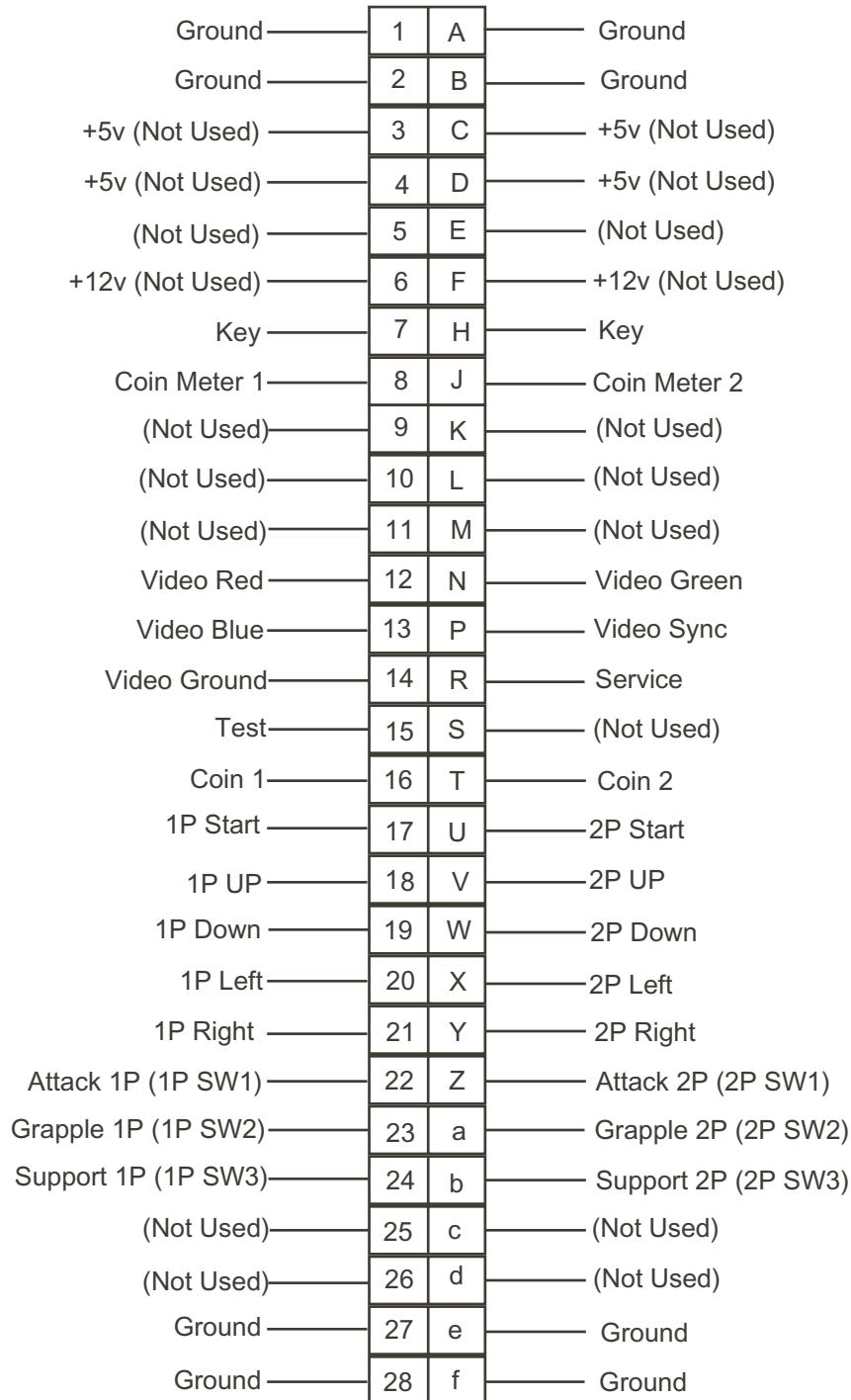
Good Idea!

Good Idea!

Enter **DIAGNOSTICS** and adjust the Volume Level, test all Buttons & Joystick for proper operation & wiring. Adjust Pricing. Coin-Up and test out a game to ensure proper play functions are as they should be.

Sega Naomi System Switch
Bracket and Speaker
Installation Diagrams
(Figure 3)

To CN1 of
Amplifier Board

Pin 1 —— JAMMA Pin 8

Pin 4 —— Yellow Wire from Extra
Harness (+5v)

Pin 5

YEL/RED GRN/RED WHT/RED

− +

Coin Meter

Test   Service

Volume

JAMMA Pin   R
JAMMA Pin   1
JAMMA Pin   15

From CN2 of
Amplifier Board

GRY/RED

ORG/RED

Left
Speaker

From CN4 of
Amplifier Board

GRY/BLUE

ORG/BLUE

Right
Speaker

Sega Naomi System
JAMMA Harness Wiring
(JAMMA I/O BD)
(Figure 4)

Left	Pin	Pin	Right
Ground	1	A	Ground
Ground	2	B	Ground
+5v (Not Used)	3	C	+5v (Not Used)
+5v (Not Used)	4	D	+5v (Not Used)
(Not Used)	5	E	(Not Used)
+12v (Not Used)	6	F	+12v (Not Used)
Key	7	H	Key
Coin Meter 1	8	J	Coin Meter 2
(Not Used)	9	K	(Not Used)
(Not Used)	10	L	(Not Used)
(Not Used)	11	M	(Not Used)
Video Red	12	N	Video Green
Video Blue	13	P	Video Sync
Video Ground	14	R	Service
Test	15	S	(Not Used)
Coin 1	16	T	Coin 2
1P Start	17	U	2P Start
1P UP	18	V	2P UP
1P Down	19	W	2P Down
1P Left	20	X	2P Left
1P Right	21	Y	2P Right
Attack 1P (1P SW1)	22	Z	Attack 2P (2P SW1)
Grapple 1P (1P SW2)	23	a	Grapple 2P (2P SW2)
Support 1P (1P SW3)	24	b	Support 2P (2P SW3)
(Not Used)	25	c	(Not Used)
(Not Used)	26	d	(Not Used)
Ground	27	e	Ground
Ground	28	f	Ground

Sega Naomi System
Filter Board Information
Connector Description etc.

PSW2　PSW1　　DIPSW1

Service
Switch

Test
Switch

CN4

CN3

CN2

CN1

Preamp Level
Audio Out

VGA Level
Video Out

Power Connectors

1　　2　　3　　4

Setting for High
Resolution 31KHZ
1 -4 off

1　　2　　3

Setting for Standard
Resolution 15KHZ
1 on 2-4 off.
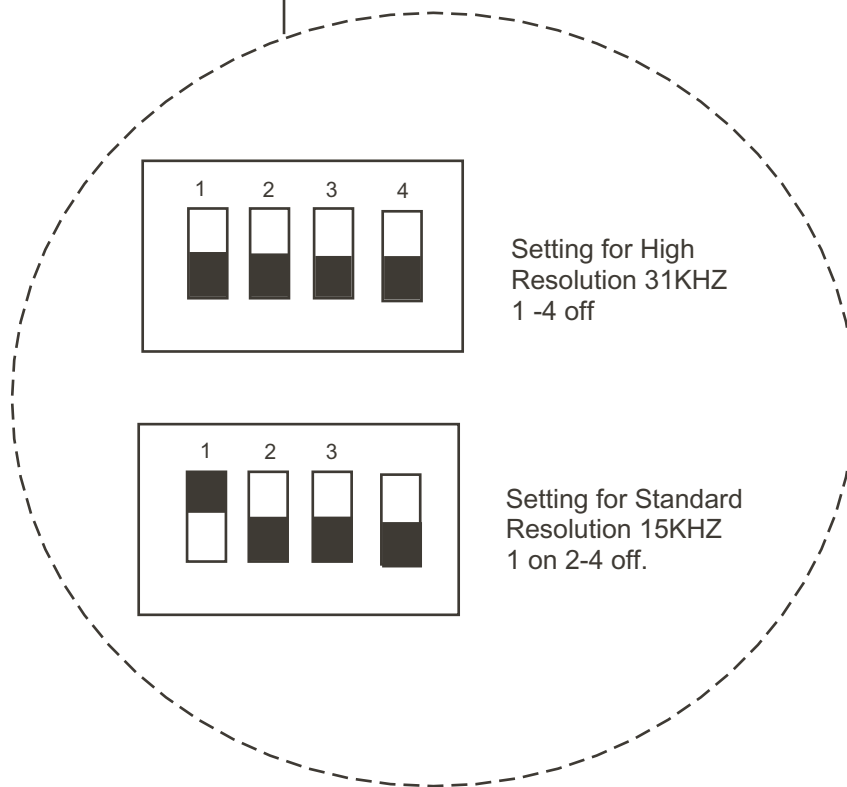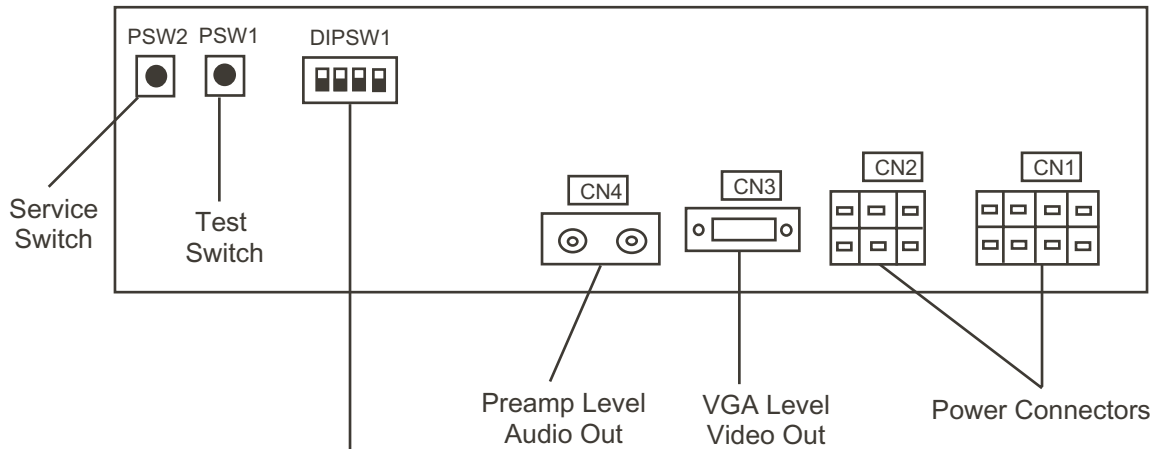
1. SPECIFICATIONS

① MONITOR

Monitor Position

HORIZONTAL

Horizontal Synchronous Frequency
15/31 kHz

② CONTROL PANEL

● NEW ASTRO CITY, NAOMI CABINET, NET CITY, BLAST CITY
(PART NO. HOT-20011 or NOA-20010-01)

PLAYER 1   PLAYER 2
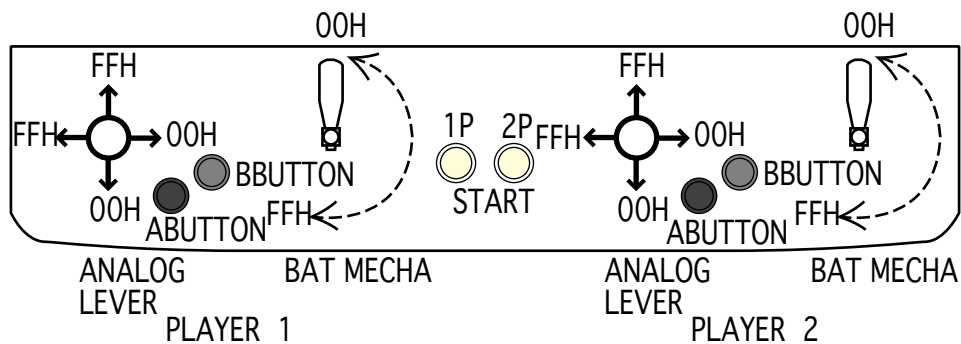
ANALOG LEVER: Move cursor (for throwing, batting); Specify base (for
defense, base running)
A BUTTON: Throw (for defense); Steal base (for batting); Advance to
next base (for base running)
Enter command (within command acceptance time)
B BUTTON: Check runner (for throwing); Move between bases (for
defense); Return to base (for running)
Enter command (within command acceptance time)
BAT MECHA: Swing
START: Start game; Time out (for throwing, batting)

The analog input on the I/O board uses the following channels:
CH0 : 1P ANALOG LEVER VOLUME VERTICAL   UP(FFH) DOWN(00H)
CH1 : 1P ANALOG LEVER VOLUME HORIZONTAL LEFT(FFH)
RIGHT(00H)
CH2 : 1P BAT MECHA VOLUME   STANDARD POS.(00H) MAX(FFH)
CH3 : (RESERVE)
CH4 : 2P ANALOG LEVER VOLUME VERTICAL   UP(FFH) DOWN(00H)
CH5 : 2P ANALOG LEVER VOLUME HORIZONTAL LEFT(FFH)
RIGHT(00H)
CH6 : 2P BAT MECHA VOLUME   STANDARD POS.(00H) MAX(FFH)
CH7 : (RESERVE)

③ Minimum DIMM Memory Capacity
256 MB

If you need to remove the BAT MECHA as in the case of a failure, open the control panel base and remove the BAT MECHA through the following procedure.
To reinstall the BAT MECHA, reverse the removing procedure, being certain that the BAT MECHA is faced in the correct direction.
For instructions on opening the control panel base, refer to the Instruction Manual of the cabinet.

WARNING!

To prevent electric shock, be sure to turn off the power for the cabinet when removing or attaching the BAT MECHA.

① Remove the wiring connector (AMP 3P, white) located near the volume.

② Remove the tamperproof screw clamping the bat center axis on the front side of the control panel.

Tightening/loosening of the tamperproof screw should use the tamperproof screw M4 wrench (540-0006-01) that is included as an accessory for the NAOMI CABINET, NET CITY, and NEW ASTRO CITY cabinet.

The tamperproof screw M4 wrench is not included with the following cabinets: Versus CITY, New VERSUS CITY, and BLAST CITY.

If the wrench is not available, please order the following part numbers:
• Wrench type (M4):   540-0006-01
• Screwdriver type (M4): 540-0018

③ Remove the four flange nuts clamping the BAT MECHA body on the back side of the control panel.

BAT MECHA   Part number: 610-0409
Part name: ASSY BAT MECHA
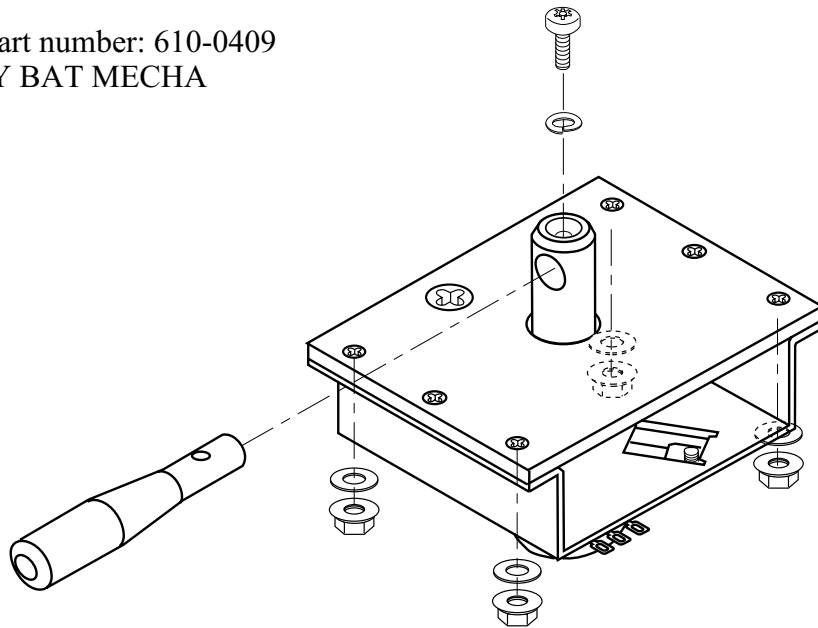
The above figure does not show the wiring of the volume and its connector (AMP 3P, white).

2. CONTENTS OF GAME

- This is a sports action game where the Major League Baseball in the United States of America was taken as a subject matter.
- In this game, the following teams appear: 14 American and 16 National teams, and two all-star teams from the two leagues.
- The number of players appearing in the game is over 700. All of the 30 really existing ballparks also appear there.
- The game player or players operate their favorite teams to participate in the baseball game, aiming at the win.
- The following play modes are available: Player vs. CPU, Player vs. Player, and Game of Intrusion.

HOW TO PLAY THE GAME

- First select your favorite from the 32 teams.
  Use the lever to designate the selected team, and use the A Button for determination. This applies also to all the subsequent operations.
- Next select the desired one from the 30 ballparks.
- Then select the starting pitcher. You can select the desired pitcher from the five candidates appearing on the screen.
- Finally select one of three levels: Easy, Standard, and Hard. The fielding strategy you use depends on the level you selected.

  LEGEND - HARD -:   Hard.
                       Both catching and throwing the ball are operated by the player. The speed of the pitched ball, i.e., pace, is the maximum.
  VETERAN - MEDIUM -:   Standard.
                       Both catching and throwing the ball are operated by the player. The pace is the standard.
  ROOKIE - EASY -:   Easy.
                       All the operations to catching the ball are made by the CPU. All the subsequent operations are made by the player.
                       The pace is the minimum.

- The game start.
  The shortest way to the win is to take advantage of the strong points of the individual baseball players to play the game.
- Apart from the score of the actual baseball game, game points may increase or decrease, depending on the contents of the baseball game.
  If the resulting number of game points is listed at an upper rank when the game is cleared, your name is included in the entry.
- In the Player vs. CPU or Player vs. Player mode, the game is cleared if the play continues until the entire baseball game ends, and if you have won, you see the ending.
- If the difference in score reaches the preset value during the progress of the game, the game is immediately treated as a called game, resulting in Game Over.

- The settings in GAME ASSIGNMENTS in the Test Mode control how the game ends:

EXTRA INNING: If this is ON, the extra part of the baseball game continues to a maximum of 12th innings.
If this is OFF, the baseball game ends when the bottom of the ninth inning ends (even if the score is even, i.e., the game is drawn).

CALLED GAME: Can be set in the 5 to 10 range.
When the difference in score reaches the setting, the baseball game ends (even if the bottom of that inning is not yet completed).

- If the game play begins at the other seat while a player is in progress at either 1P or 2P seat, you enter the Game of Intrusion Mode.
For any play in the Game of Intrusion Mode, the starting inning varies with the GAME ASSIGNMENTS settings.
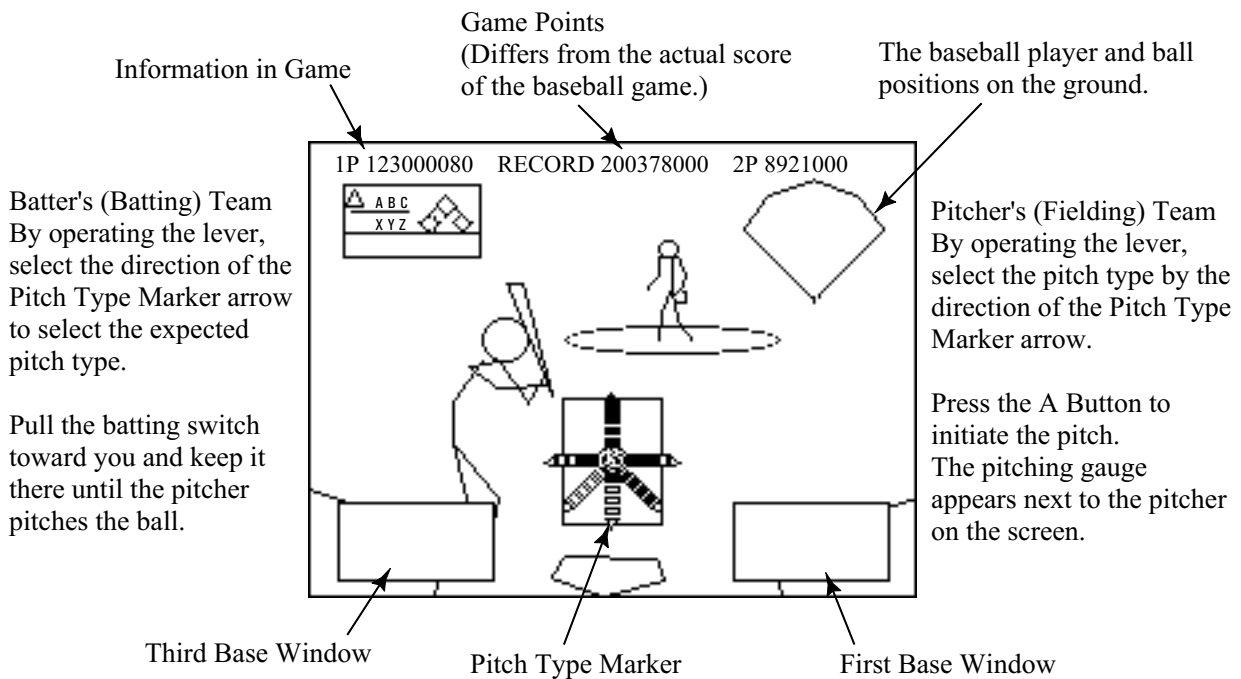
INNINGS: For 1 inning, the game begins at the top of the ninth inning.
For 2 innings, the game begins at the top of the eighth inning.
For 3 innings, the game begins at the top of the seventh inning.
For all innings, the game begins at the top of the first inning.

In the Game of Intrusion Mode, the game may continue to up to the bottom of the ninth inning. The winner can subsequently continue the play in the Player vs. CPU Mode.
If a draw results from a baseball game in the Game of Intrusion Mode, Game Over results for both of the players.

GAME SCREEN

Pitching & Batting Screen

Game Points
(Differs from the actual score of the baseball game.)

Information in Game

The baseball player and ball positions on the ground.

1P 123000080   RECORD 200378000   2P 8921000

Batter's (Batting) Team
By operating the lever, select the direction of the Pitch Type Marker arrow to select the expected pitch type.

Pull the batting switch toward you and keep it there until the pitcher pitches the ball.

Pitcher's (Fielding) Team
By operating the lever, select the pitch type by the direction of the Pitch Type Marker arrow.

Press the A Button to initiate the pitch.
The pitching gauge appears next to the pitcher on the screen.

Third Base Window   Pitch Type Marker   First Base Window

Pitching Gauge

Batter's (Batting) Team

By operating the lever, move the batting cursor to aim at the ball.

Release the batting switch timely to hit the ball.

1P 123000080   RECORD 200378000   2P 8921000

A B C
X Y Z
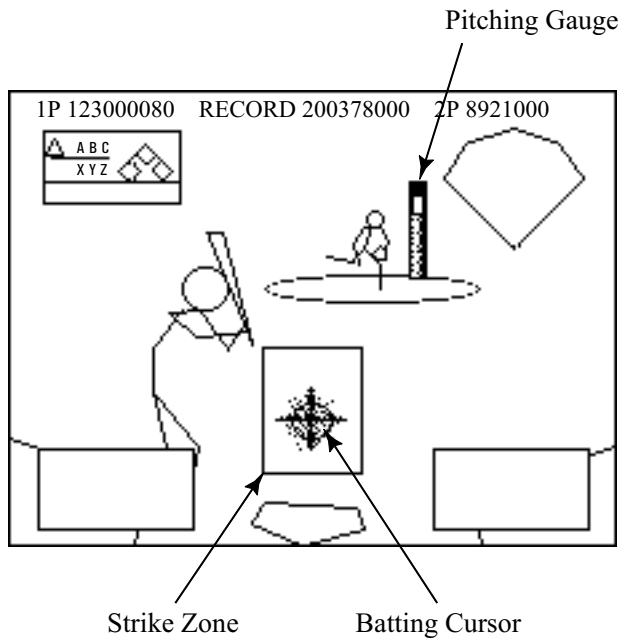
Pitcher's (Fielding) Team

Select the course of the ball using the lever.

While observing the pitching gauge, press the A Button timely (best when MAX appears at the top of the game).

Strike Zone   Batting Cursor

Batter's (Batting) Team

If your expectation turns out right, the batting cursor is highlighted and the probability of hit increases.

1P 123000080   RECORD 200378000   2P 8921000

A B C
X Y Z
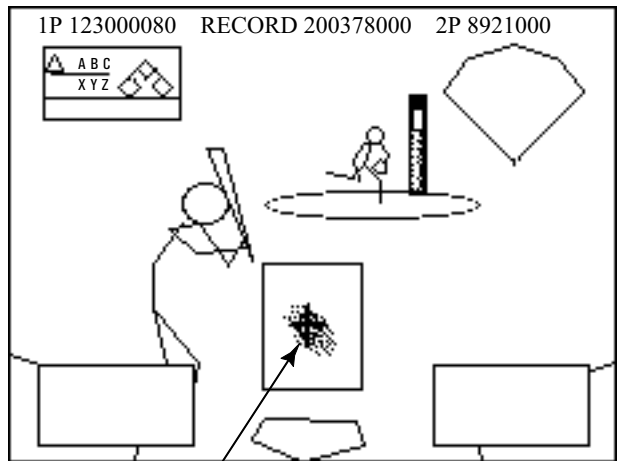
Pitcher's (Fielding) Team

Pressing the button timely improves all of the speed and control of the ball and the sharpness of breaking balls.
If you press the button untimely (too early or late), all of the speed and control of the ball and the sharpness of breaking balls will be poor reversely.

The cursor shape changes depending on the expected pitch type.
If your expectation turns out right, the ball will be hit more easily and to a further point, with the cursor color changed.
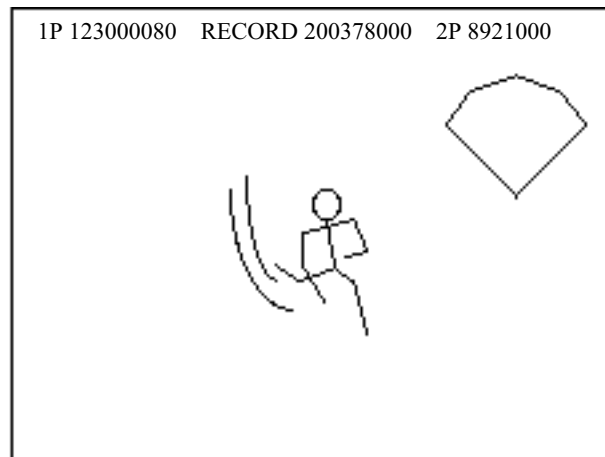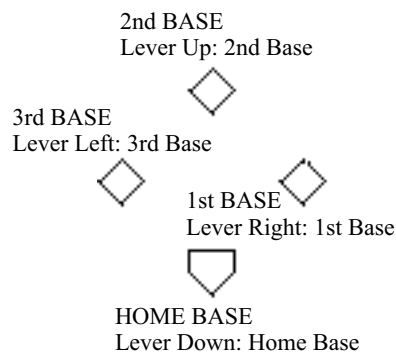
Fielding Screen

Landing Point

OUT

OUT

1P 123000080   RECORD 200378000   2P 8921000
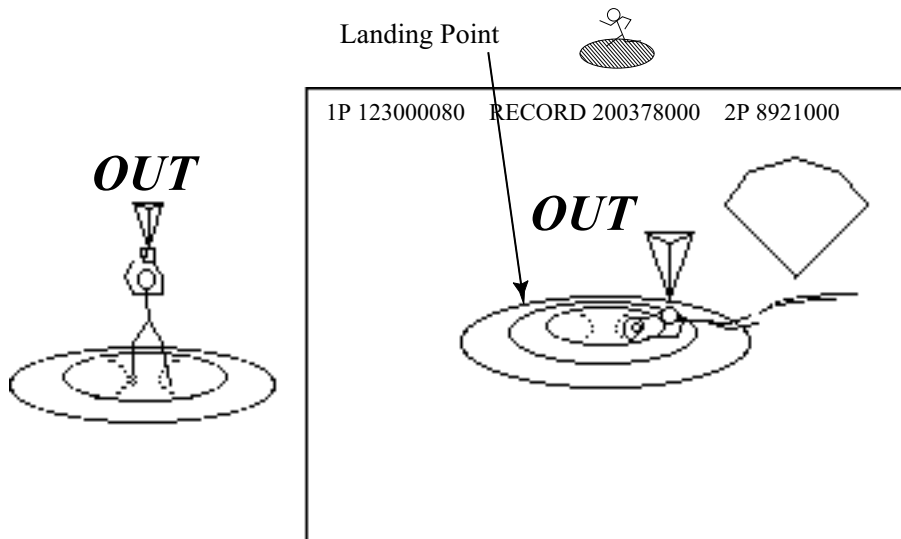
Using the lever, move a fielder to the expected landing point of the ball.
By pressing the B Button, you can replace the field you want to move.

When approximating to the ball, the fielder automatically catches the ball.

For example, the ball is occasionally carried away by wind.

If you press the A Button timely, the fielder exhibits a super catch by fine play.
If you selected ROOKIE-EASY- for the level at the start of the game, the above operations are unnecessary.

2nd BASE
Lever Up: 2nd Base

3rd BASE
Lever Left: 3rd Base

1st BASE
Lever Right: 1st Base

HOME BASE
Lever Down: Home Base

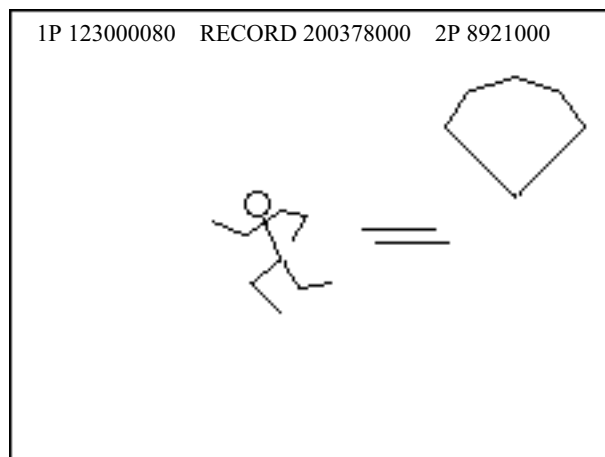1P 123000080   RECORD 200378000   2P 8921000

Throw/Shift

Select the desired base using the lever.

Pressing the A Button causes the fielder to throw the ball to the base you selected.

Pressing the B Button causes the fielder to run toward the base you selected.

1P 123000080   RECORD 200378000   2P 8921000

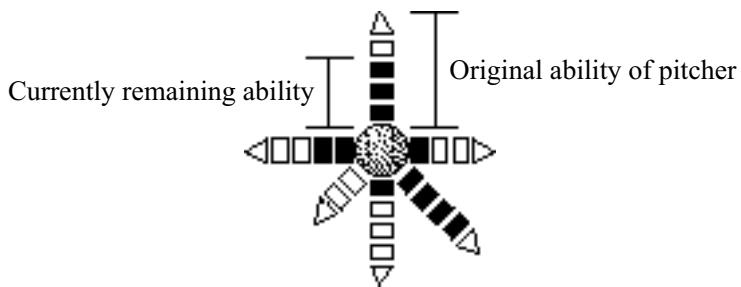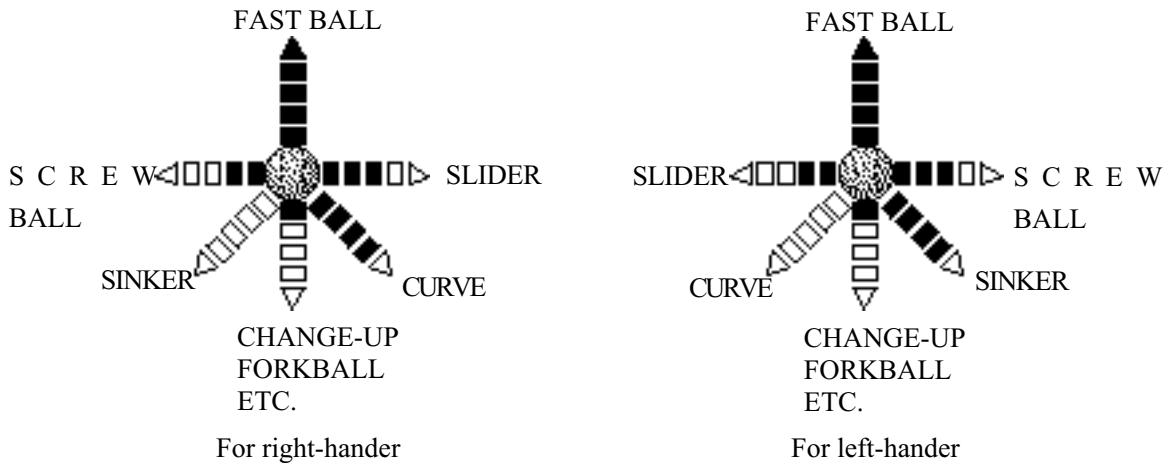### Base running

Select the desired base using the lever.

Pressing the A Button causes the fielder to run toward the base you selected.

Pressing the B Button causes the fielder to return to the previous base.

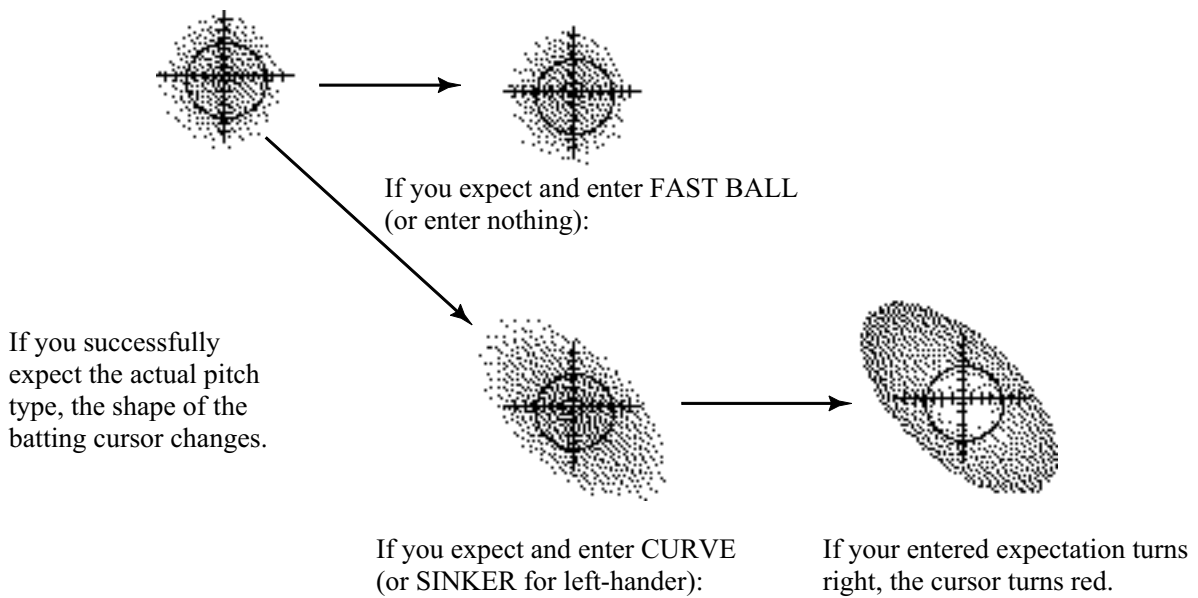While you hold the A and B Buttons together, the field stays there.

◯ Pitch Type Marker

The pitch type marker shows the available pitch types.

FAST BALL

S C R E W◁□□■■■⬤■■■□▷ SLIDER
BALL

SINKER

CURVE

CHANGE-UP
FORKBALL
ETC.

For right-hander

FAST BALL

SLIDER◁□□■■■⬤■■■□▷ S C R E W
BALL

CURVE

SINKER

CHANGE-UP
FORKBALL
ETC.

For left-hander

Currently remaining ability

Original ability of pitcher

◁□□■■■⬤■□□▷

◯ Batting Cursor

If you successfully expect the actual pitch type, the shape of the batting cursor changes.

If you expect and enter FAST BALL
(or enter nothing):

If you successfully expect the actual pitch type, the shape of the batting cursor changes.

If you expect and enter CURVE
(or SINKER for left-hander):

If your entered expectation turns right, the cursor turns red.

○ NAMES AND ABBREVIATIONS OF THE TEAMS AND BALLPARK NAMES
  APPEARING IN THE GAME

The team names are listed alphabetically.

American League

1. Anaheim Angels/ANA
   :Edison International Field

2. Baltimore Orioles/BAL
   :Oriole Park at Camden Yards

3. Boston Red Sox/BOS
   :Fenway Park

4. Chicago White Sox/CHW
   :Comiskey Park

5. Cleveland Indians/CLE
   :Jacobs Field

6. Detroit Tigers/DET
   :Comerica Park

7. Kansas City Royals/KC
   :Kauffman Stadium

8. Minnesota Twins/MIN
   :Hubert H.Humphrey Metrodome

9. New York Yankees/NYY
   :Yankee Stadium

10. Oakland Athletics/OAK
    :Network Associates Coliseum

11. Seattle Mariners/SEA
    :SAFECO Field

12. Tampa Bay Devil Rays/TB
    :Tropicana Field

13. Texas Rangers/TEX
    :The Ballpark in Arlington

14. Toronto Blue Jays/TOR
    :SkyDome

National League

1. Arizona Diamondbacks/ARI
   :BankOne Ballpark

2. Atlanta Braves/ATL
   :Turner Field

3. Chicago Cubs/CHC
   :Wrigley Field

4. Cincinnati Reds/CIN
   :Cinergy Field

5. Colorado Rockies/COL
   :Coors Field

6. Florida Marlins/FLA
   :Pro Player Stadium

7. Houston Astros/HOU
   :Enron Field

8. Los Angeles Dodgers/LA
   :Dodger Stadium

9. Milwaukee Brewers/MIL
   :Miller Park

10. Montreal Expos/MON
    :Olympic Stadium

11. New York Mets/NYM
    :Shea Stadium

12. Philadelphia Phillies/PHI
    :Veterans Stadium

13. Pittsburgh Pirates/PIT
    :PNC Park

14. St. Louis Cardinals/STL
    :Busch Stadium

15. San Diego Padres/SD
    :Qualcomm Park at Jack Murphy Stadium

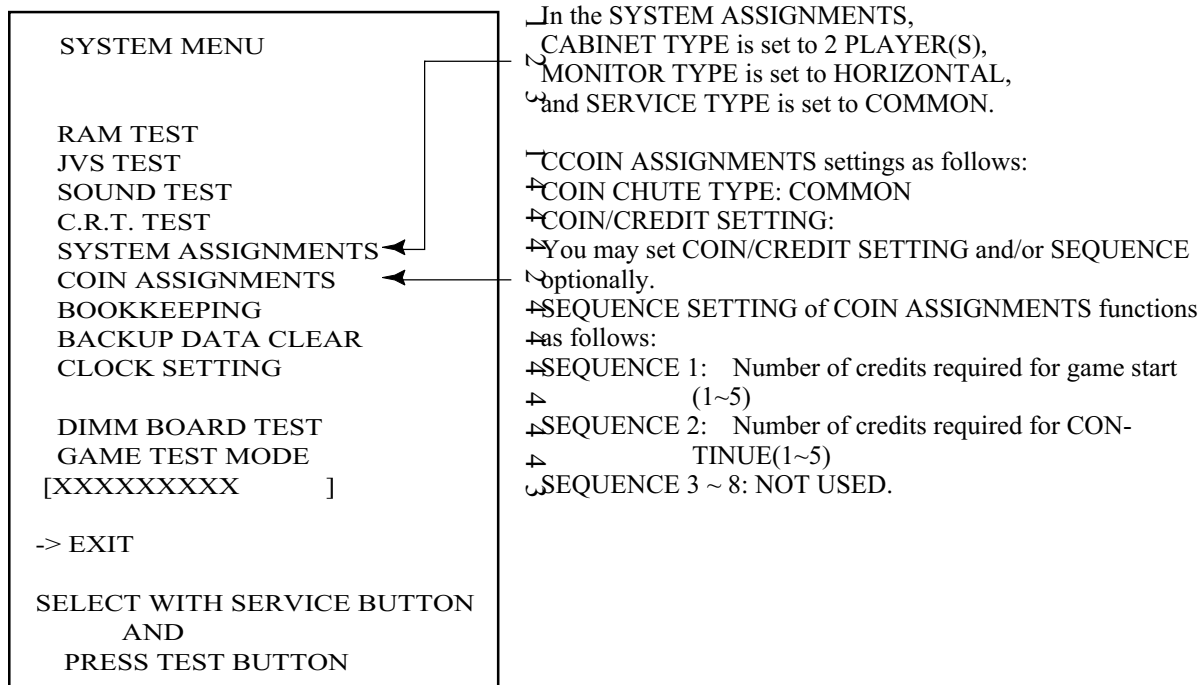16. San Francisco Giants/SF
    :Pacific Bell Park

3. TEST MODE

A. SYSTEM MENU

STOP

IMPORTANT

> When settings are changed in SYSTEM ASSIGNMENTS, COIN
> ASSIGNMENTS, and GAME ASSIGNMENTS of GAME TEST MODE,
> be sure to exit from the test mode of SYSTEM MENU screen. The contents
> of setting changes are stored in the IC on the BOARD when exiting from
> the Test Mode. If the power is turned off in the Test Mode (before exiting),
> the contents of setting changes are ineffective. In this case, the settings
> remain unchanged.

This test mode mainly allows the IC Board to be checked for accurate functioning,
monitor color to be adjusted as well as COIN ASSIGNMENTS and GAME
ASSIGNMENTS to be adjusted.

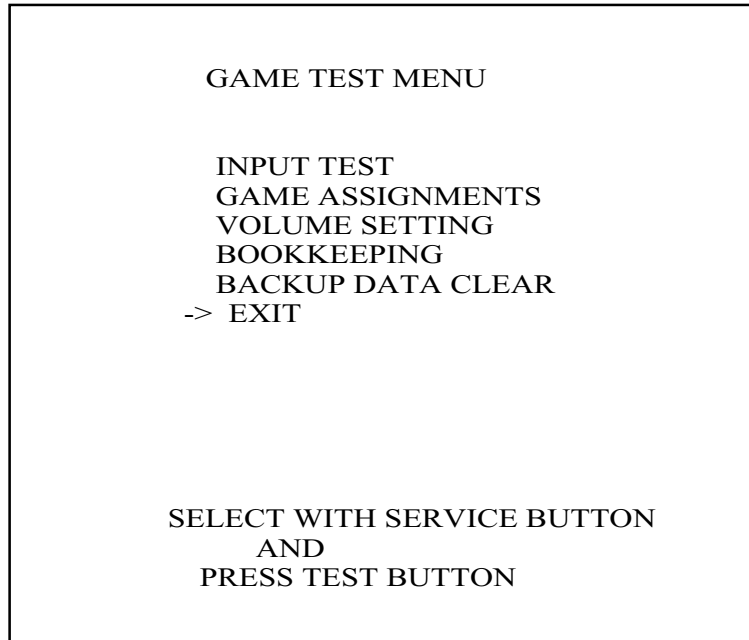1) After turning power on, press the TEST Button to have the following SYSTEM
   MENU displayed.

```
     SYSTEM MENU


     RAM TEST
     JVS TEST
     SOUND TEST
     C.R.T. TEST
     SYSTEM ASSIGNMENTS
     COIN ASSIGNMENTS
     BOOKKEEPING
     BACKUP DATA CLEAR
     CLOCK SETTING

     DIMM BOARD TEST
     GAME TEST MODE
    [XXXXXXXXX          ]

    -> EXIT

    SELECT WITH SERVICE BUTTON
            AND
      PRESS TEST BUTTON
```

In the SYSTEM ASSIGNMENTS,
CABINET TYPE is set to 2 PLAYER(S),
MONITOR TYPE is set to HORIZONTAL,
and SERVICE TYPE is set to COMMON.

COIN ASSIGNMENTS settings as follows:
COIN CHUTE TYPE: COMMON
COIN/CREDIT SETTING:
You may set COIN/CREDIT SETTING and/or SEQUENCE
optionally.
SEQUENCE SETTING of COIN ASSIGNMENTS functions
as follows:
SEQUENCE 1:   Number of credits required for game start
              (1~5)
SEQUENCE 2:   Number of credits required for CON-
              TINUE(1~5)
SEQUENCE 3 ~ 8: NOT USED.

2) Press the SERVICE Button to move the arrow. Bring the arrow to the desired
   item and press the TEST Button.

3) Press the TEST Button in the GAME TEST MODE to display the GAME
   TEST MENU peculiar to this game. See the next page onward.

4) Upon finishing the test, bring the arrow to EXIT and press the TEST Button to
   return to the Game mode.

For detailed explanations as regards the SYSTEM TEST MODE, refer to
GD-ROM SERVICE MANUAL (420-6620-01).

B. GAME TEST MODE

By selecting "GAME TEST MODE" and pressing the TEST Button on the
System Test Menu Screen, the Test Mode Menu Screen (Game Test Mode Menu
Screen) appears, which is unique to this game.

```
           GAME TEST MENU


           INPUT TEST
           GAME ASSIGNMENTS
           VOLUME SETTING
           BOOKKEEPING
           BACKUP DATA CLEAR
       ->  EXIT




         SELECT WITH SERVICE BUTTON
                 AND
             PRESS TEST BUTTON
```

GAME TEST MENU Screen

• Pressing the SERVICE Button moves the arrow (->) on the screen. By moving the
  arrow, select the item you want to run.

• Pressing the TEST Button runs the currently selected item. You are brought to the
  screen for that item, and can change or adjust the settings.

• With "EXIT" selected, pressing the TEST Button returns you to the System Test
  Menu Screen.

• All the subsequent GAME TEST MODE operations can basically be made using
  the B and A Buttons instead of the SERVICE and TEST Buttons.
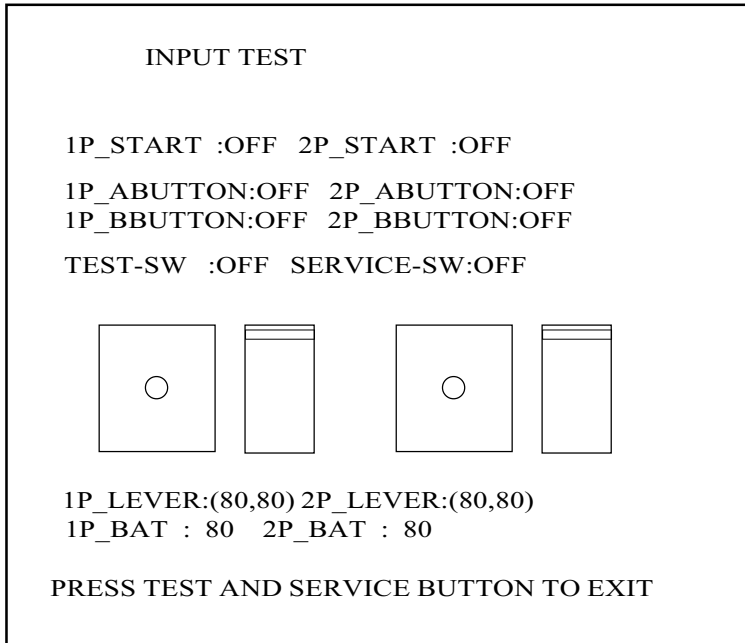
  SERVICE Button - B Button
  TEST Button - A Button

a. INPUT TEST

This test checks the input devices.
Using this screen, check the input devices periodically.
Pressing the TEST and SERVICE Buttons together returns you to the Game Test
Menu Screen.

INPUT TEST

1P_START :OFF 2P_START :OFF

1P_ABUTTON:OFF 2P_ABUTTON:OFF
1P_BBUTTON:OFF 2P_BBUTTON:OFF

TEST-SW   :OFF   SERVICE-SW:OFF

1P_LEVER:(80,80) 2P_LEVER:(80,80)
 1P_BAT : 80   2P_BAT : 80

PRESS TEST AND SERVICE BUTTON TO EXIT

INPUT TEST Screen

Operate each of the input devices. If the indication at the right of the device label
changes from OFF to ON, the device is normal.
LEVER and BAT indicate the lever and batting switch volume control values,
respectively. Check whether each of the values changes and the cursor moves
smoothly according to the lever or batting switch operations you make.

• Lever and batting switch settings
    LEVER:Check that, when you move the lever fully to the top, bottom, left, or
                right, the cursor, marked by a circle (Åõ) in the figure, moves securely
                from an end to another in the frame while the value below the frame is
                changing.

    BAT: Check that, when you move the batting switch fully from an end to
                another in the movable range, the cursor, marked by horizontal bars in
                the figure, moves securely from the top (or bottom) to the bottom (or
                top) while the value below the frame is changing.

If the cursor does not move from an end to another, retry to set a proper value
with VOLUME SETTING and then perform the recheck on this Test Screen.

b. GAME ASSIGNMENTS

STOP

IMPORTANT

Once you have made change to the settings, select and run EXIT and exit the GAME TEST MODE. The new settings do not take effect until this mode is exited.

This screen lets you make change to the game difficulty and other settings.

Changing Procedure

① Press the SERVICE Button to move the arrow to the item to which you want to make change.

② Pressing the TEST Button changes the indication located at the right of the currently selected item. Change it to the desired one.

③ Press the SERVICE Button to select EXIT, and press the TEST Button. This returns you to the Game Test Menu Screen.

```
            GAME ASSIGNMENTS

        DIFFICULTY     NORMAL
        INNINGS        2 INNINGS
        EXTRA INNING    ON
        CALLED GAME        10
        INITIAL TEAM 1P  NYY
              2P  NYM
      -> EXIT


        SELECT WITH SERVICE BUTTON
             AND
          PRESS TEST BUTTON
```

GAME ASSIGNMENTS Screen

• DIFFICULTY: Set the difficulty by changing the pitching speed of the
                pitcher or modifying the CPU's routine of thinking. Set one
                of the following five levels:

        VERY EASY - EASY - NORMAL - HARD - VERY HARD
            Easier ──────────────────────────▶ Harder

• INNINGS: Set the number of innings you can play with the start-enabled
                (or continuable) credits.
                When each setting has been made, an additional credit is
                required each time any inning in parentheses (Å@) ends.

    1 INNING setting: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
    2 INNINGS setting: (1, 2) (3, 4) (5, 6) (7, 8, 9) (10, 11, 12)
    3 INNINGS setting: (1, 2, 3) (4, 5, 6) (7, 8, 9) (10, 11, 12)
    ALL INNINGS setting: No additional credit is required even if you play the
                             extra part of the baseball game to a maximum of
                             12th innings.

• EXTRA INNING: Set whether the game may continue to extra innings.
                If this is OFF, the game ends even if the score is even after
                the end of the bottom of the ninth inning.

• CALLED GAME: Set the difference in score that allows the game to be
                established as a called game. The value may be 5 to 10.
                When the difference in score reaches the setting, the game
                ends.

• INITIAL TEAM: Set the team that is first selected on the Select Team Screen.

c. VOLUME SETTING

● Normal play is guaranteed only after all the input devices have been set up properly.
   Be sure to make the proper settings before you begin demonstration for the selling purpose.
● Once you have made change to the settings, select and run EXIT WITH SAVE and exit the GAME TEST MODE. The new settings do not take effect until this mode is exited.

This screen lets you set the sensitivity of the input devices.
If you are unsatisfied with the operability or have adjusted or replaced the volume control of an input device, make the settings on this screen.

```
              VOLUME SETTING
       PLAYER1
       LEVER_H    MAX(FFH)  MIN(00H) NOW(80H)
       LEVER-V    MAX(FFH)  MIN(00H) NOW(80H)
       BAT        MAX(FFH)  MIN(00H) NOW(00H)

       PLAYER2
       LEVER-H    MAX(FFH)  MIN(00H) NOW(80H)
       LEVER-V    MAX(FFH)  MIN(00H) NOW(80H)
       BAT        MAX(FFH)  MIN(00H) NOW(00H)

          EXIT WITH SAVE
        -> EXIT WITHOUT SAVE


         SELECT WITH SERVICE BUTTON
                 AND
           PRESS TEST BUTTON
```

VOLUME SETTING Screen

①Move the lever and batting switch fully in the movable range.

②Release the lever and batting switch, and leave them unloaded.

Move Lever Horizontally (LEVER-H)
Move the lever fully to the left or right, and then leave it unloaded.

Move Lever Vertically (LEVER-V)
Move the lever fully to the top or bottom, and then leave it unloaded.

Batting Switch (BAT)
Move the batting switch fully, and then leave it unloaded.

③Move the SERVICE Button to align the arrow with EXIT WITH SAVE, and press the TEST Button. Save the settings, and return to the Game Test Menu Screen.

• If you press the TEST Button with the arrow aligned with EXIT WITHOUT SAVE, you return to the Game Test Menu Screen without making change to the settings.

• After adjustment, be sure to use INPUT TEST to check that the values change properly according to the operations you make. If no improvements are observed even after the settings are retried, a component such as the lever or batting switch may have failed.

d. BOOKKEEPING

This screen lists the data to be saved.
Pressing the TEST Button returns you to the Game Test Menu Screen.

```
        BOOKKEEPING

NUMBER OF GAMES              0
TOTAL PLAY TIME      0D 00H 00M 00S
AVERAGE PLAY TIME        00M 00S
LONGEST PLAY TIME        00M 00S
SHORTEST PLAY TIME        00M 00S




        PRESS TEST BUTTON TO EXIT
```
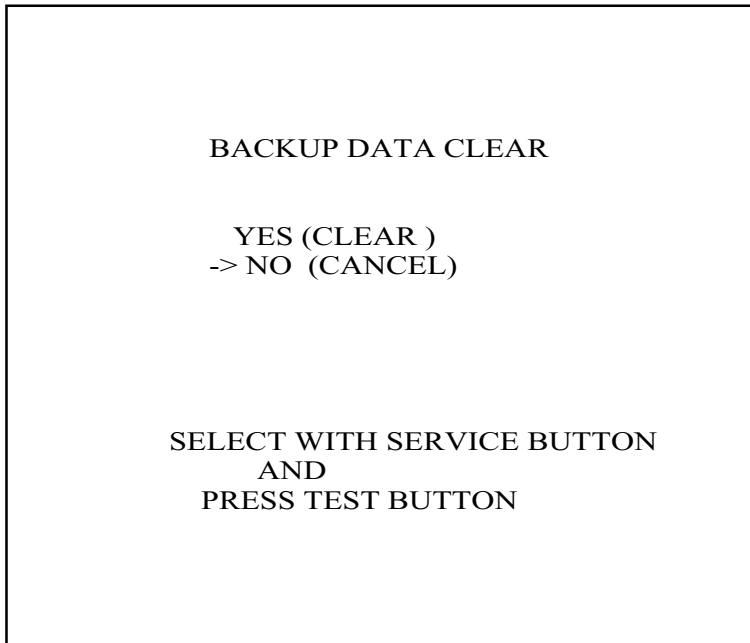
BOOKKEEPING Screen

● NUMBER OF GAMES: Total number of games played

● TOTAL PLAY TIME: Play time

e. BACKUP DATA CLEAR

```
┌─────────────────────────────────────────┐
│                                         │
│                                         │
│          BACKUP DATA CLEAR              │
│                                         │
│                                         │
│            YES (CLEAR )                 │
│         -> NO  (CANCEL)                 │
│                                         │
│                                         │
│                                         │
│                                         │
│      SELECT WITH SERVICE BUTTON         │
│               AND                       │
│          PRESS TEST BUTTON              │
│                                         │
│                                         │
│                                         │
│                                         │
└─────────────────────────────────────────┘
```

BACKUP DATA CLEAR Screen

This screen is used to initialize BOOKKEEPING and the High Score Ranking.
To clear the data about the coins/credits, you have to run BACKUP DATA
CLEAR in the SYSTEM TEST MODE.
Clearing the data does not influence any game settings (except the data).
When clearing, use the SERVICE Button to bring the arrow (->) to "YES
(CLEAR)" and press the TEST Button. When the data has been cleared,
"COMPLETED" will be displayed. Press the TEST Button to return to the Menu
mode. Bring the arrow to "NO (CANCEL)" and press the TEST Button to return
to the Menu mode without clearing the data.

4. GAME BOARD

<table>
<tr>
<td rowspan="2">⚠
CAUTION!</td>
<td>● Do not expose the Game Board so as to avoid causing an accident or malfunctioning.
● Static electricity discharge can damage electronic parts on the IC Board. Before starting work by opening the Shield Case Lid, be sure to touch grounded metallic surfaces to discharge physically charged static electricity.
● When replacing the Game Board, refer to the CVT Manual and Instruction Manual.</td>
</tr>
</table>
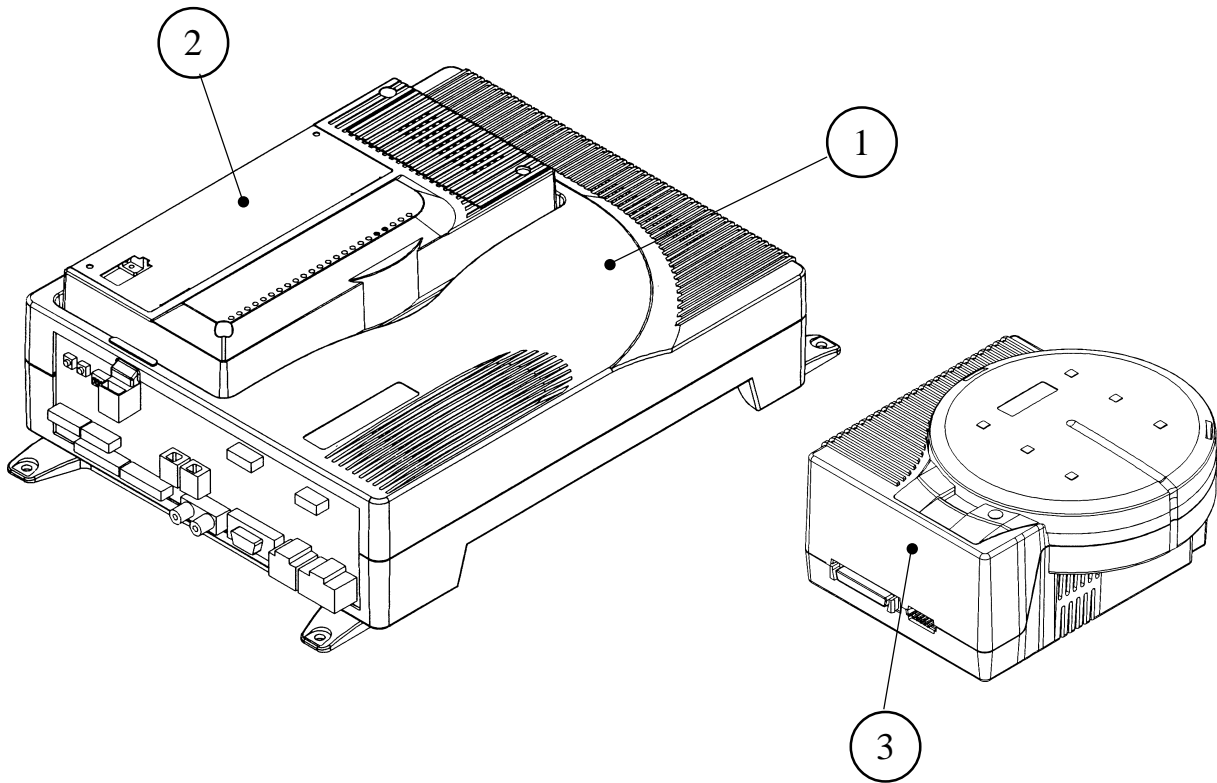
	PART NO.	DESCRIPTION
①+②	840-0051D-01 840-0051D-02 840-0051D-03 840-0051D-04	ASSY CASE NAO PCI DIMM BD USA ASSY CASE NAO PCI DIMM BD EXP ASSY CASE NAO PCI DIMM BD KOR ASSY CASE NAO PCI DIMM BD AUS
①	840-0001A-01 840-0001A-02 840-0001A-03 840-0001A-04	ASSY CASE NAOMI MAIN BD USA ASSY CASE NAOMI MAIN BD EXP ASSY CASE NAOMI MAIN BD KOR ASSY CASE NAOMI MAIN BD AUS
②	840-0001F	ASSY CASE NAO DIMM BD COM
③	610-0617 610-0617-01	GD-ROM DRIVE UNIT NAOMI GD-ROM DRIVE UNIT NAOMI VA2

442-00067B (STICKER 840-0067B)
Attached place
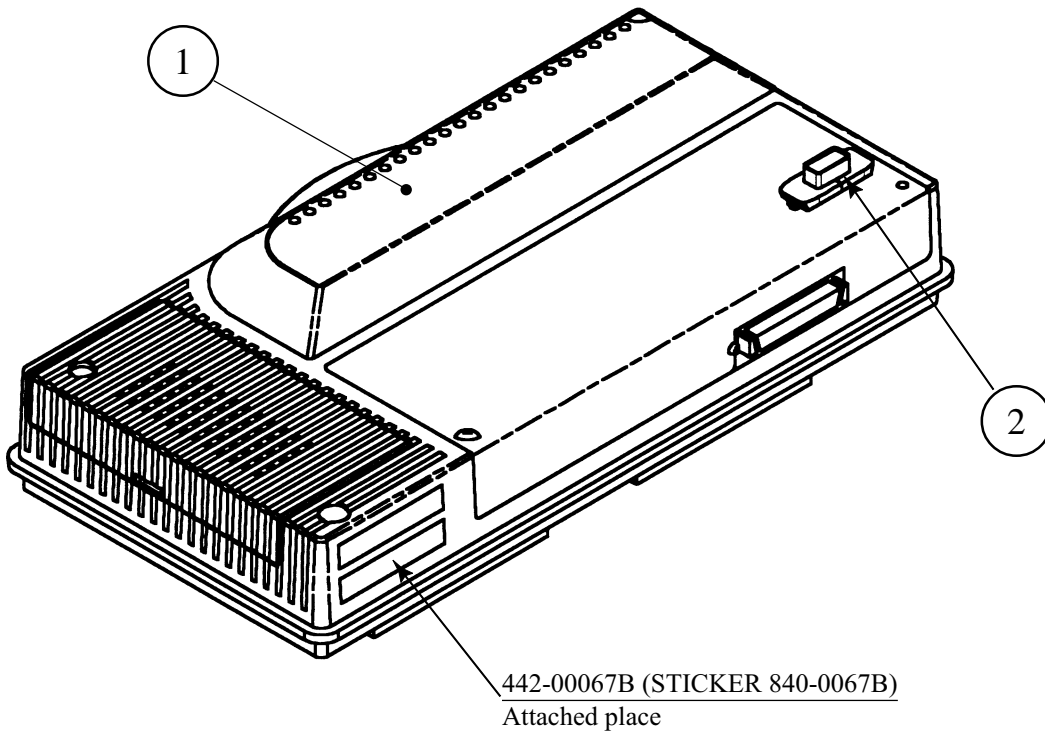
	PART NO.	DESCRIPTION
①	840-0001F	ASSY CASE NAO DIMM BD COM
②		KEY CHIP
①+②	840-0067B	DIMM BD NAO MB2K2

5. SOFT KIT

STOP

IMPORTANT

Handling the GD-ROM Disk

● Do not contaminate the disks with your fingerprints or dust particles. Contaminated disks may lower audio and video quality.
● When cleaning the disks, do not use volatile chemicals (benzine, thinner, etc.), cleaning sprays, and antistatic agents.
● Do not use cracked, warped, or damaged disks.
  Do not attach papers or seals onto the disks; do not scratch the disks.
  Do not use the disks with a sign of peeled seals, tapes, etc.
  Observing these instructions, do not insert such a non-usable disk into the GD-ROM drive. Otherwise the inserted disk can not be ejected.
● When cleaning a heavily contaminated disk, use clean cloth that has been soaked in water and squeezed. Then remove moisture with dry cloth.
● When holding a disk, be careful not to contaminate it with your fingerprints.
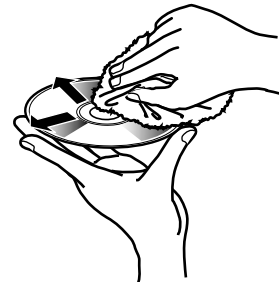
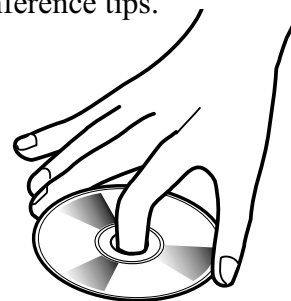Use clean cloth to wipe the disk gently and into a radial direction.

How to Hold a Disk

With both hands:
Put your thumbs and forefingers of both hands on the disk's 4 circumference tips.
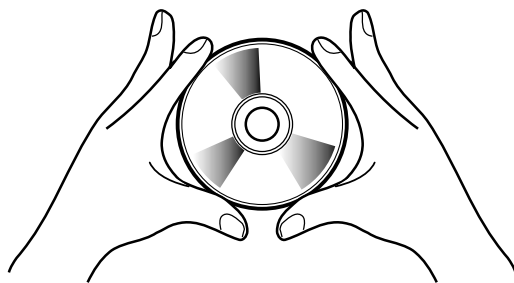
With one hand:
Insert your forefinger into a central hole and at the same time put your thumb and middle finger on the disk's 2 circumference tips.
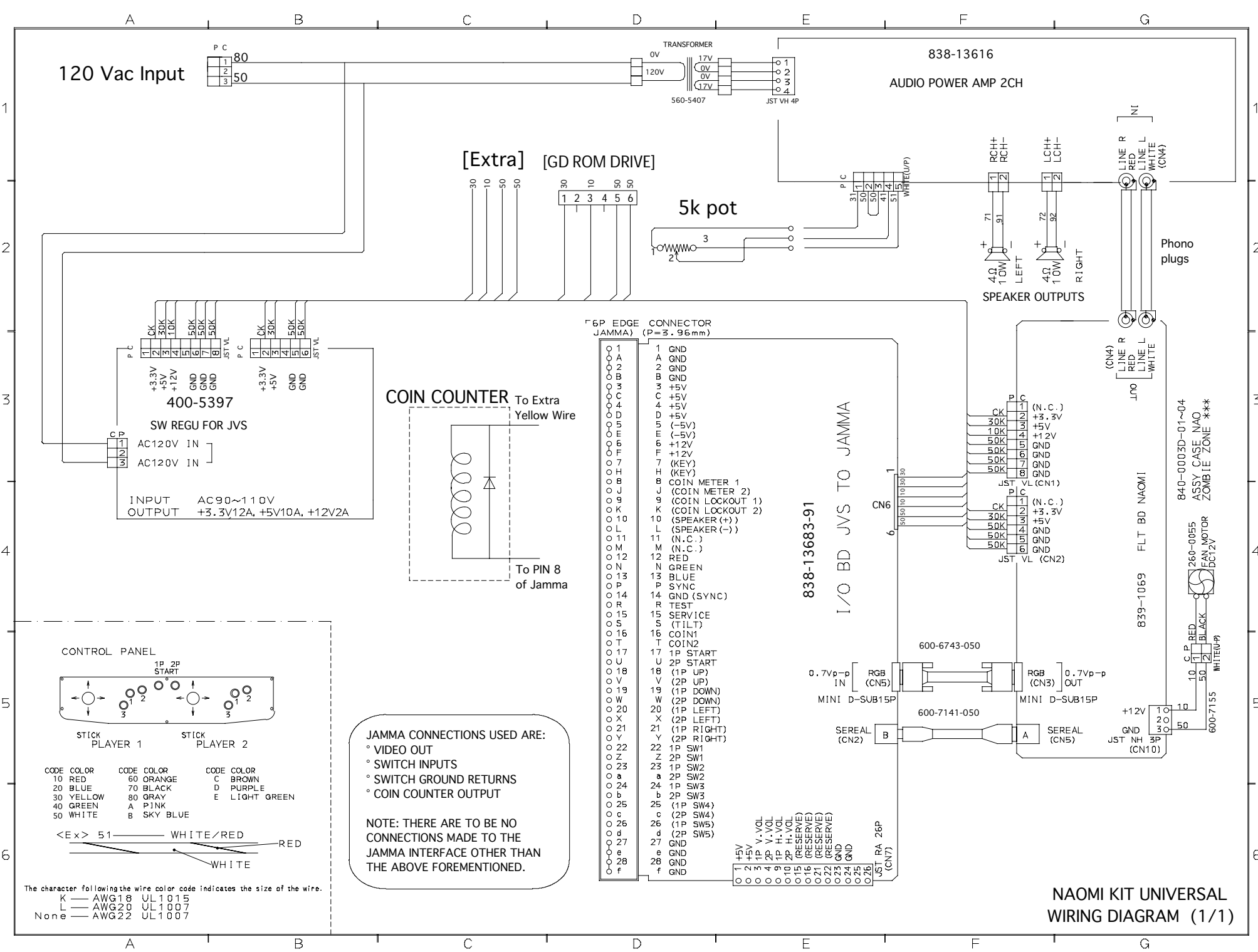
How to Handle the Key Chip

● The key chip is a precision device. Handle it carefully because it may be damaged by heat, shock, and static electricity.
● Use the key chip with the GD-ROM disk of the corresponding game that has been shipped together with the key chip.
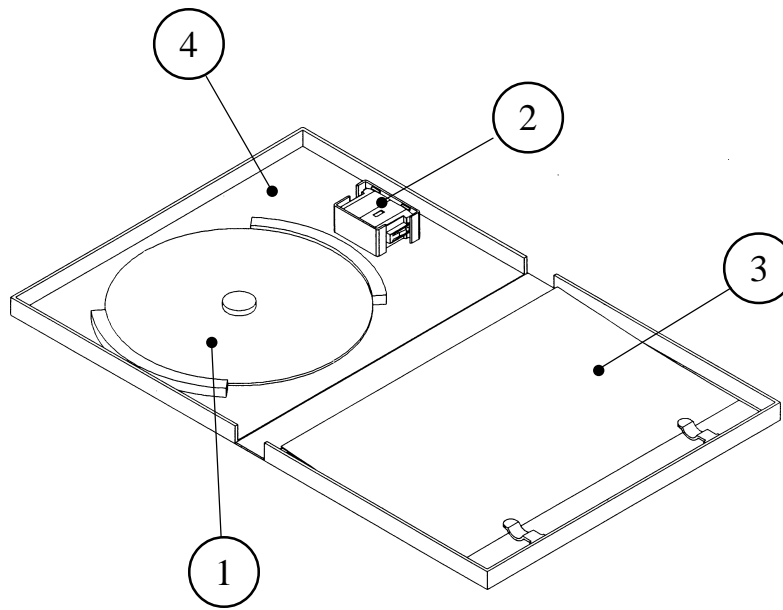
	PART NO.	DESCRIPTION
①+②+③+④	610-0624-0010	GD SOFT KIT MB2K2 ENG
①	GDS-0010 *	NAOMI GDROM MB2K2
②		KEY CHIP
③	420-6621-0010E	SERVICE MANUAL MB2K2 ENG
④	253-5507	DISK CASE WITH IC HOLDER

120 Vac Input

TRANSFORMER

838-13616

AUDIO POWER AMP 2CH

0V 17V
120V 0V
0V
17V

560-5407   JST VH 4P

[Extra]   [GD ROM DRIVE]

5k pot

LINE R   RED
LINE L   WHITE (CN4)

RCH+ RCH−   LCH+ LCH−

WHITE(U/P)

Phono plugs

P C
31
50 1
50 2
41 4
51 5

71 91   72 92

+ −   + −
4Ω 10W   4Ω 10W
LEFT   RIGHT

SPEAKER OUTPUTS

(CN4)
LINE R   RED
LINE L   WHITE

OUT

P C
CK   30K   10K   50K   50K   50K
1 2 3 4 5 6 7 8
+3.3V +5V +12V GND GND GND
JST VL

400-5397

SW REGU FOR JVS

P C
CK   30K   50K   50K   50K
1 2 3 4 5 6
+3.3V +5V GND GND
JST VL

C P
1 AC120V IN
2
3 AC120V IN

INPUT   AC90~110V
OUTPUT   +3.3V12A, +5V10A, +12V2A

COIN COUNTER   To Extra Yellow Wire

To PIN 8 of Jamma

6P EDGE CONNECTOR
JAMMA (P=3.96mm)

1	1	GND
A	A	GND
B	B	GND
2	2	+5V
C	C	+5V
3	3	+5V
D	D	+5V
4	4	+5V
5	5	(−5V)
E	E	(−5V)
6	6	+12V
F	F	+12V
7	7	(KEY)
H	H	(KEY)
8	8	COIN METER 1
J	J	(COIN METER 2)
9	9	(COIN LOCKOUT 1)
K	K	(COIN LOCKOUT 2)
10	10	(SPEAKER (+))
L	L	(SPEAKER (−))
11	11	(N.C.)
M	M	(N.C.)
12	12	RED
N	N	GREEN
13	13	BLUE
P	P	SYNC
14	14	GND (SYNC)
R	R	TEST
15	15	SERVICE
S	S	(TILT)
16	16	COIN1
T	T	COIN2
17	17	1P START
U	U	2P START
18	18	(1P UP)
V	V	(2P UP)
19	19	(1P DOWN)
W	W	(2P DOWN)
20	20	(1P LEFT)
X	X	(2P LEFT)
21	21	(1P RIGHT)
Y	Y	(2P RIGHT)
22	22	1P SW1
Z	Z	2P SW1
23	23	1P SW2
a	a	2P SW2
24	24	1P SW3
b	b	2P SW3
25	25	(1P SW4)
c	c	(2P SW4)
26	26	(1P SW5)
d	d	(2P SW5)
27	27	GND
e	e	GND
28	28	GND
f	f	GND

838-13683-91
I/O BD JVS TO JAMMA

P C
CK   30K   10K   50K   50K   50K   50K
1 (N.C.)
2 +3.3V
3 +5V
4 +12V
5 GND
6 GND
7 GND
8 GND
JST VL (CN1)

P C
CK   30K   50K   50K   50K
1 (N.C.)
2 +3.3V
3 +5V
4 GND
5 GND
6 GND
JST VL (CN2)

CN6

840-0003D-01-04
ASSY CASE NAO
ZOMBIE ZONE ***

839-1069   FLT BD NAOMI

260-0055
FAN MOTOR
DC12V

C P   RED
1   BLACK
WHITE(U/P)

600-6743-050

0.7Vp-p RGB   RGB 0.7Vp-p
IN (CN5)   (CN3) OUT

MINI D-SUB15P   MINI D-SUB15P

600-7141-050

SEREAL   B   A   SEREAL
(CN2)   (CN5)

+12V
GND
JST NH 3P
(CN10)

600-7155

CONTROL PANEL

1P 2P
START

STICK   STICK
PLAYER 1   PLAYER 2

CODE	COLOR	CODE	COLOR	CODE	COLOR
10	RED	60	ORANGE	C	BROWN
20	BLUE	70	BLACK	D	PURPLE
30	YELLOW	80	GRAY	E	LIGHT GREEN
40	GREEN	A	PINK		
50	WHITE	B	SKY BLUE		

<Ex> 51 ——— WHITE/RED
——— RED
——— WHITE

The character following the wire color code indicates the size of the wire.
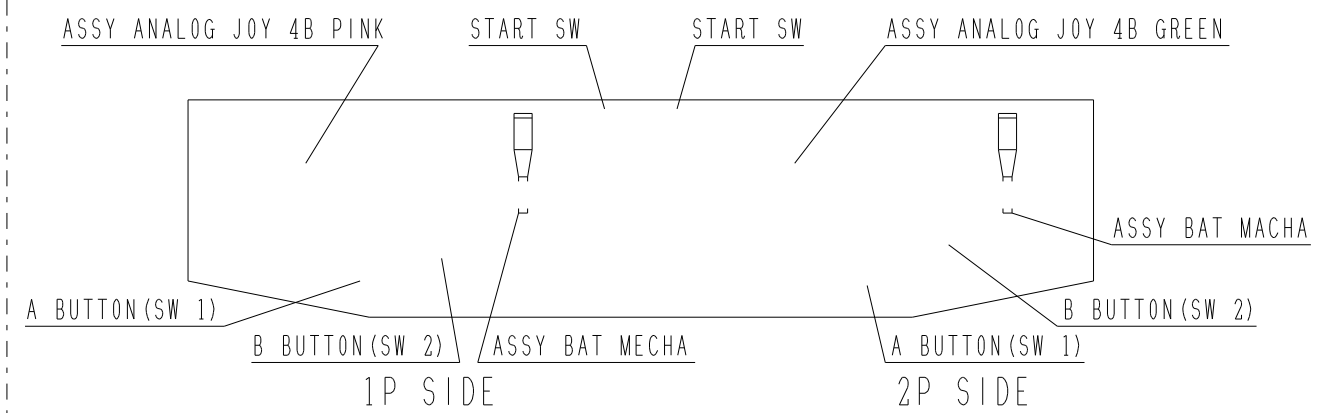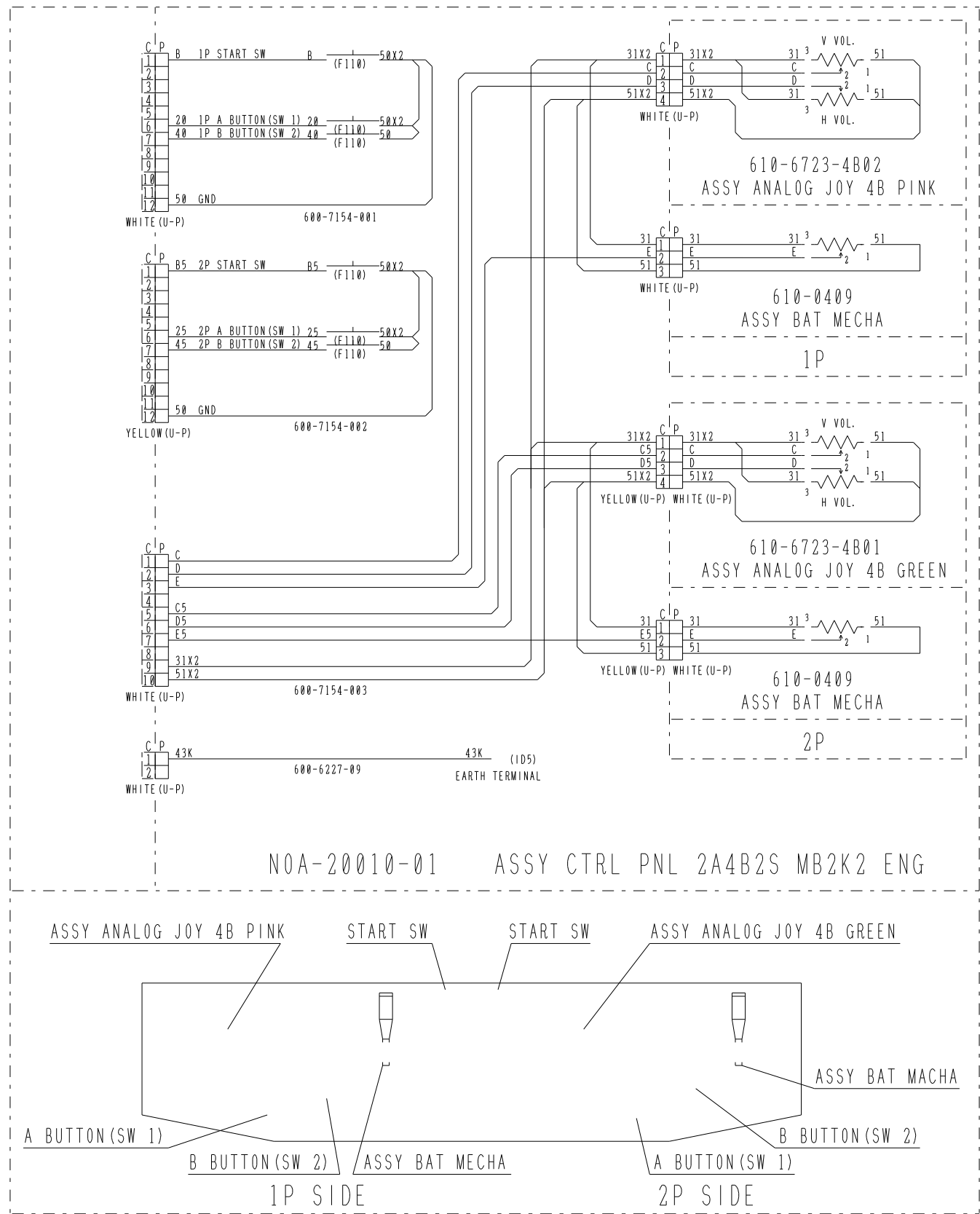
K   AWG18 UL1015
L   AWG20 UL1007
None AWG22 UL1007
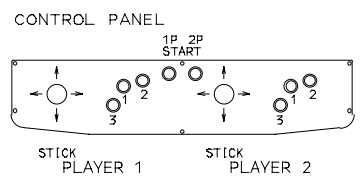
JAMMA CONNECTIONS USED ARE:
° VIDEO OUT
° SWITCH INPUTS
° SWITCH GROUND RETURNS
° COIN COUNTER OUTPUT

NOTE: THERE ARE TO BE NO CONNECTIONS MADE TO THE JAMMA INTERFACE OTHER THAN THE ABOVE FOREMENTIONED.

JST RA 26P
1 +5V
2 +5V
3 1P V.VOL
4 1P H.VOL
5 2P V.VOL
6 2P H.VOL
15 (RESERVE)
16 (RESERVE)
21 (RESERVE)
22 (RESERVE)
23 GND
24 GND
25 GND
26 GND
(CN7)

NAOMI KIT UNIVERSAL
WIRING DIAGRAM (1/1)

N0A-20010-01   ASSY CTRL PNL 2A4B2S MB2K2 ENG

C P B 1P START SW B (F110) 50X2
C P B5 2P START SW B5 (F110) 50X2

20 1P A BUTTON(SW 1) 20 (F110) 50X2
40 1P B BUTTON(SW 2) 40 (F110) 50

50 GND
WHITE(U-P)   600-7154-001

25 2P A BUTTON(SW 1) 25 (F110) 50X2
45 2P B BUTTON(SW 2) 45 (F110) 50

50 GND
YELLOW(U-P)   600-7154-002

C P C
D
E
C5
D5
E5
31X2
51X2
WHITE(U-P)   600-7154-003

C P 43K 43K (ID5)
WHITE(U-P)   600-6227-09   EARTH TERMINAL

31X2 C P 31X2
C C
D D
51X2 51X2
WHITE(U-P)

V VOL.
31 3 51
C C
D 31 51
H VOL.

610-6723-4B02
ASSY ANALOG JOY 4B PINK

31 C P 31
E E
51 51
WHITE(U-P)

31 3 51
E

610-0409
ASSY BAT MECHA

1P

31X2 C P 31X2
C5 C
D5 D
51X2 51X2
YELLOW(U-P) WHITE(U-P)

V VOL.
31 3 51
C C
D 31 51
H VOL.

610-6723-4B01
ASSY ANALOG JOY 4B GREEN

31 C P 31
E5 E
51 51
YELLOW(U-P) WHITE(U-P)

31 3 51
E

610-0409
ASSY BAT MECHA

2P

ASSY ANALOG JOY 4B PINK   START SW   START SW   ASSY ANALOG JOY 4B GREEN

ASSY BAT MACHA

A BUTTON(SW 1)
B BUTTON(SW 2)   ASSY BAT MECHA   A BUTTON(SW 1)
B BUTTON(SW 2)

1P SIDE   2P SIDE

	WIRE COLOR			
8	BLACK	E	LIGHT GREEN	
7	ORANGE	D	PURPLE	43 EARTH WIRE
5	WHITE	C	BROWN	
4	GREEN	B	SKY BLUE	U AWG16 UL1015
3	YELLOW	A	PINK	K AWG18 UL1015
2	BLUE	9	GRAY	N AWG20 UL1007
1	RED			AWG22 UL1007

型式の適用
TOP-ASS'Y

設 計	製 図	検 図	承 認
柳瀬	柳瀬	小山	吉本
04/24-'01	04/24-'01	04/24-'01	04/24-'01

SEGA SEGA CORPORATION

ASSY CTRL PNL 2A4B2S MB2K2 ENG

DESCRIPTION   DIAGRAM NO.   (1/X)
ALTERATION

VISIT OUR WEBSITE!

Address: http://www.seuservice.com/

SegaService.com

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seu mailing list •

Sega Enterprises Inc.,
USA
Service Department
phone 415.701.6580
fax 415.701.6594

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@ 800x600

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• Bulletins

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darl.davidson@seu.sega.com OR dave.cantrelle@seu.sega.com

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